

Notice of Allowability

Application No.

10/777,074

Applicant(s)

KIM, NAM-IL

Examiner

Pritham Prabhakher

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01/23/2008.
2. ☒ The allowed claim(s) is/are 1-4 and 6-27.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☒ SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☒ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>See Continuation Sheet</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 12/03/2004; 07/18/2005; 02/06/2007; 05/14/2007; 11/16/2007.

DETAILED ACTION

Allowable Subject Matter

Claims 1-4 and 6-27 are allowed.

The following is an examiner's statement of reasons for allowance:

In regard to independent **Claim 1**, the closest prior art of record fails to teach or reasonably suggest, *"A hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus providing rotation of the housing in a predetermined rotation range, wherein the hinge apparatus comprises: a fixing bracket secured to the main body; a hinge unit secured to the housing, and connected to the fixing bracket to be reciprocatingly rotatable within a predetermined angle; a shaft member for rotatably connecting the hinge unit and the fixing bracket so that the hinge unit and the fixing bracket can rotate with respect to each other; and a sensing unit disposed on at least one of the hinge unit and the fixing bracket to sense the relative rotational range of the hinge unit with respect to the fixing bracket; wherein the fixing bracket further comprises a pair of sensing holes for detection by the sensing unit to enable the sensing unit to sense the relative rotational range of the hinge unit with respect to the fixing bracket."*

Regarding dependent **Claims 4, 6, and 23-25**, these claims are allowed because they depend on allowed independent claim 1.

With regard to independent **Claim 2**, the closest prior art of record fails to teach or reasonably suggest, *"A hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus providing rotation of the housing in a predetermined rotation range, wherein the hinge apparatus comprises: a fixing bracket secured to the main body; a hinge unit secured to the housing, and connected to the fixing bracket to be reciprocatingly rotatable within a predetermined angle; a shaft member for rotatably connecting the hinge unit and the fixing bracket so that the hinge unit and the fixing bracket can rotate with respect to each other; and a sensing unit disposed on at least one of the hinge unit and the fixing bracket to sense the relative rotational range of the hinge unit with respect to the fixing bracket; wherein the fixing bracket comprises: a body having a first surface; a first locking protrusion protruding from the first surface of the body for restricting the rotational movement of the hinge unit when the first locking protrusion is rotated with respect to the hinge unit."*

Regarding dependent **Claim 7**, this claim is allowed because it depends on allowed independent claim 2.

With regard to independent **Claim 3**, the closest prior art of record fails to teach or reasonably suggest, *"A hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus providing rotation of the housing in a predetermined rotation range, wherein the hinge apparatus comprises: a*

*fixing bracket secured to the main body; a hinge unit secured to the housing, and connected to the fixing bracket to be reciprocatingly rotatable within a predetermined angel; a shaft member for rotatably connecting the hinge unit and the fixing bracket so that the hinge unit and the fixing bracket can rotate with respect to each other; and a sensing unit disposed on at least one of the hinge unit and the fixing bracket to sense the relative rotational range of the hinge unit with respect to the fixing bracket; **wherein the fixing bracket further comprises: a first rib protruding from the first surface at a radial distance different from that at which the first locking protrusion protrudes; and a second rib protruding from the first rib, wherein said firs and second rib being arranged to couple said fixing bracket to said hinge unit.***

With regard to independent **Claim 8**, the closest prior art of record fails to teach or reasonably suggest, "A hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus providing rotation of the housing in a predetermined rotation range, wherein the hinge apparatus comprises: a fixing bracket secured to the main body; a hinge unit secured to the housing, and connected to the fixing bracket to be reciprocatingly rotatable within a predetermined angel; a shaft member for rotatably connecting the hinge unit and the fixing bracket so that the hinge unit and the fixing bracket can rotate with respect to each other; and a sensing unit disposed on at least one of the hinge unit and the fixing bracket to sense the relative rotational range of the hinge unit with respect to the fixing bracket; **wherein the hinge unit comprises: a hinge bracket fixed onto the housing; a contact plate**

connected with the hinge bracket; and a plate spring disposed between the hinge bracket and the contact plate for urging the contact plate toward the fixing bracket."

Regarding dependent **Claims 9-11**, these claims are allowed because they depend on allowed independent claim 8.

With regard to independent **Claim 12**, the closest prior art of record fails to teach or reasonably suggest, "A hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus providing rotation of the housing in a predetermined rotation range, wherein the hinge apparatus comprises: a fixing bracket secured to the main body; a hinge unit secured to the housing, and connected to the fixing bracket to be reciprocatingly rotatable within a predetermined angle; a shaft member for rotatably connecting the hinge unit and the fixing bracket so that the hinge unit and the fixing bracket can rotate with respect to each other; and a sensing unit disposed on at least one of the hinge unit and the fixing bracket to sense the relative rotational range of the hinge unit with respect to the fixing bracket; **wherein the sensing unit comprises: a substantially elastic piece; a pair of cam pins disposed on both ends of the elastic piece for sensing the relative rotational range of the hinge unit with respect to the fixing bracket; and a pair of switches provided at positions corresponding to the cam pins for providing a signal indicating an operating mode of the image photographing apparatus."**

Regarding dependent **Claims 13-14**, these claims are allowed because they depend on allowed independent claim 12.

With regard to independent **Claim 15**, the closest prior art of record fails to teach or reasonably suggest, *"A hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus providing rotation of the housing in a predetermined rotation range, wherein the hinge apparatus comprises: a fixing bracket secured to the main body; a hinge unit secured to the housing, and connected to the fixing bracket to be reciprocatingly rotatable within a predetermined angle; a shaft member for rotatably connecting the hinge unit and the fixing bracket so that the hinge unit and the fixing bracket can rotate with respect to each other; and a sensing unit disposed on at least one of the hinge unit and the fixing bracket to sense the relative rotational range of the hinge unit with respect to the fixing bracket; and a click force providing unit disposed between the fixing bracket and the contact plate for providing a predetermined indication at predetermined intervals during the rotation of the housing with respect to the body."*

In regard to dependent **Claims 16-21**, these claims are also allowed because they depend on allowed independent claim 15.

With regard to independent **Claim 22**, the closest prior art of record fails to teach or reasonably suggest, *"A hinge apparatus for rotatably connecting a housing with respect to a main body of an image photographing apparatus providing rotation of the housing in a predetermined rotation range, wherein the hinge apparatus comprises: a fixing bracket secured to the main body; a hinge unit secured to the housing, and connected to the fixing bracket to be reciprocatingly rotatable within a predetermined angle; a shaft member for rotatably connecting the hinge unit and the fixing bracket so that the hinge unit and the fixing bracket can rotate with respect to each other; and a sensing unit disposed on at least one of the hinge unit and the fixing bracket to sense the relative rotational range of the hinge unit with respect to the fixing bracket; a pair of sensor holes disposed within the fixing bracket; a cam surface comprising an operating surface, a non-contact surface and an inclined surface, the cam surface located on the hinge unit; and an elastic piece comprising a pair of cam pins disposed to protrude through the pair of sensor holes, and a pair of switches disposed to contact the pair of cam pins; wherein as the cam pins protrude through the sensing holes, the cam pins are pushed backwards by contact with the operating surface to contact one of the pair of switches due to the operating surface being formed of a third predetermined length in consideration of the interval between the cam pins such that only one of the cam pins can be contacted by the operating surface, and an operating mode of the image photographing apparatus is determined by which cam pin contacts the operating surface and is pushed back to contact one of the pair of switches."*

With regard to independent **Claim 26**, the closest prior art of record fails to teach or reasonably suggest, *"An image photographing apparatus, comprising: a main body; a fixing bracket secured to the main body; a camera system comprising a first camera unit capturing a digital still image and a second camera unit capturing a digital video image; a hinge apparatus rotatably connecting the main body and the camera system; a signal delivery unit electrically connecting the main body and the camera system; a sensing unit disposed on at least one of the hinge apparatus and the fixing bracket to sense the relative rotational range of the hinge apparatus with respect to the fixing bracket; and a liquid crystal display (LCD) panel displaying the captured digital video images; wherein the first camera unit and the second camera unit are turned on or off by rotation of the main body and the camera system; and wherein the fixing bracket further comprises a pair of sensing holes for detection by the sensing unit to enable the sensing unit to sense the relative rotational range of the hinge apparatus with respect to the fixing bracket."*

Regarding dependent **Claim 27**, this claim is allowed because it depends on allowed independent claim 26.

The following are the closest references found:

Shibata et al. (US Pub No.: 2001/0004269A1) disclose a portable terminal

comprises a main unit having a microphone, a key operation unit, and a radio sending/receiving function of image and sound, a rotation axial unit having a video camera and an operation dial, an image display unit with a touch panel capable of displaying an image taken by the video camera, a received image and a screen for input operation, and a flip unit having the image display unit, a CCD camera, a speaker and an operation button. The rotation axial unit further includes an opening/shutting axis for connecting the main unit and the flip unit in a mutually rotatable way and a rotation axis for connecting the flip unit in a way of rotating the flip unit across the above rotation in the horizontal direction, and when the flip unit is opened and rotated across, it is used as a video camera with a monitor.

Nakamura et al. (US Patent No.: 4106037) disclose a flash unit that is mounted in a lens cap which constitutes an indispensable accessory of the camera.

Takagi et al. (US Patent No.: 6226448B1) disclose a VTR with a monitor-equipped built-in camera that includes a monitor/VTR portion and a camera portion. The monitor/VTR portion is integrally formed of a VTR portion holding a removable tape cassette and a monitor portion including a liquid crystal display device. A rotary mechanism attaches the camera portion to the monitor/VTR portion in a relatively rotatable manner. Furthermore, the monitor/VTR portion has a VTR driving substrate for driving the VTR portion, and a monitor driving

substrate for driving the monitor portion. The VTR driving substrate and the monitor driving substrate are integrally sandwiched between the monitor portion and the VTR portion.

Conclusion

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pritham Prabhakher whose telephone number is 571-270-1128. The examiner can normally be reached on M-F (7:30-5:00) Alt Friday's Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571)272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/777,074
Art Unit: 2622

Page 11

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